

**AMENDMENTS TO THE SPECIFICATION**

Please **delete** the section headings at page 1, after paragraph [5] and before paragraph [6].

Please insert the following section heading at page 1, before paragraph [6]:

-- Objects of the Invention --

Please replace the section heading at page 2, before paragraph [13] with the following rewritten section heading:

-- Technical SolutionSUMMARY OF THE INVENTION --

Please replace paragraph [13] on page 2 with the following replacement paragraph:

-- According to an aspect of the invention for realizing the above objects, it is provided an electron beam irradiator comprising: a vacuum chamber having a beam irradiation window formed longitudinally in an outer periphery of the vacuum chamber; a cathode placed centrally and longitudinally inside the vacuum chamber, and having a field emitter tip formed on the cathode, corresponding to the beam irradiation window; and a high voltage supply placed at one end of the vacuum chamber, and adapted to apply high voltage toward the cathode; a first support including a pin insert hole formed at one end of the cathode and a first insulator formed in the high voltage supply for the passage of a high voltage supply pin so that the high voltage supply pin is inserted into the pin insert hole of the cathode through the first insulator; and a second support including an insert groove formed in a second insulator longitudinally and axially located at the other end of the cathode so that an insert protrusion formed at the other end of the cathode is inserted into the insert groove to support the cathode. --

Please delete the section heading at page 3, after paragraph [20] and before paragraph [21].

Please replace the section heading before paragraph [26] on page 4 with the following rewritten section heading:

-- Best Mode for Carrying Out the InventionBrief Description of the Drawings --

Please insert the following section heading at page 5, before paragraph [39]:

-- Detailed Description of the Invention --

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Please replace paragraph [44] beginning on page 5, that continues and ends on page 6 with the following replacement paragraph:

-- Carbon nanotubes were found by Dr. Iijima Suimo of NEC Corporation's Fundamental Research Laboratory in 1991 when he was analyzing carbon solids grown on a graphite cathode by using electric discharge, in which hexagons of six carbon atoms are connected together into the shape of a tube having a diameter on the order of merely from several to several tens of nanometers. This is also called as a field emitter tip. ~~In addition By way of additional background, a nanometer asmeasures 1/1,000,000,000m, which~~ is substantially equal to 1/100,000 of a human hair. --

Please delete the section heading at page 9, after paragraph [76] and before paragraph [77].